



Fueling the Fight to



The Tactical Hose Reel System (HRS)



Major System Components

- 11 Hose Spools
- Two Base Units (one Power Unit/Base)
- Two Component Chests

Characteristics

Width - 96 in

Height - 82 $\frac{3}{4}$ in

Weight - 6820 lbs

Length - 79 $\frac{1}{4}$ in

Power unit - 235 lbs



HRS Deployment

- HRS Deploys at 2.5MPH Using Power Unit, 5MPH without
- Retrieves at 1 Mph



Booster Stations

- 3.5 Mi Apart
- (2) 20K Gallon Bags per Station
- Refueling Capability @ 4



Fuel Mission



- Provide Entire Marine Expeditionary Force with Fuel Throughout Theater of Operations

Planning

IF THIS IS THE
BAD AMERICAN
MILITARY PLAN,
I'D HATE TO
SEE THEIR
GOOD ONE!!

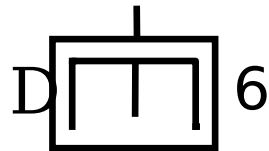
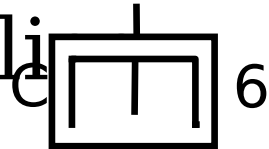
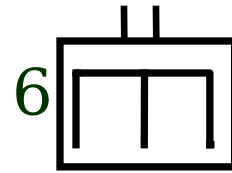


OIF Preparations

- Combined Training Between Active and Reserve Engineer Bulk Fuel Companies
- Operation Ridgeline At Camp Pendleton
- HRS Training at Luke Auxiliary Airfield In Phoenix, AZ.
- Around the Clock Training in Kuwait

Requirements

- (2) Bulk Fuel Companies
- (62) Miles of Hose
- (17) Booster Pump Assemblies
- (17) 600 GPM Pumps
- (34) 20K Gallon Fuel Bags



Required Equipment

- MK48/18A1
- MK48/16/870
- MK48/14
- MTR
- HMMWV
- D-7 Bulldozer
- 130G
- Extended Boom Forklift
- Communications Equipment

Execution

- Two Companies Deployed 31 Mi of HRS Simultaneously
- Golden Spike (halfway point)
- Tapped Into Army Fuel Farm In Kuwait
- Strategic Staging Areas



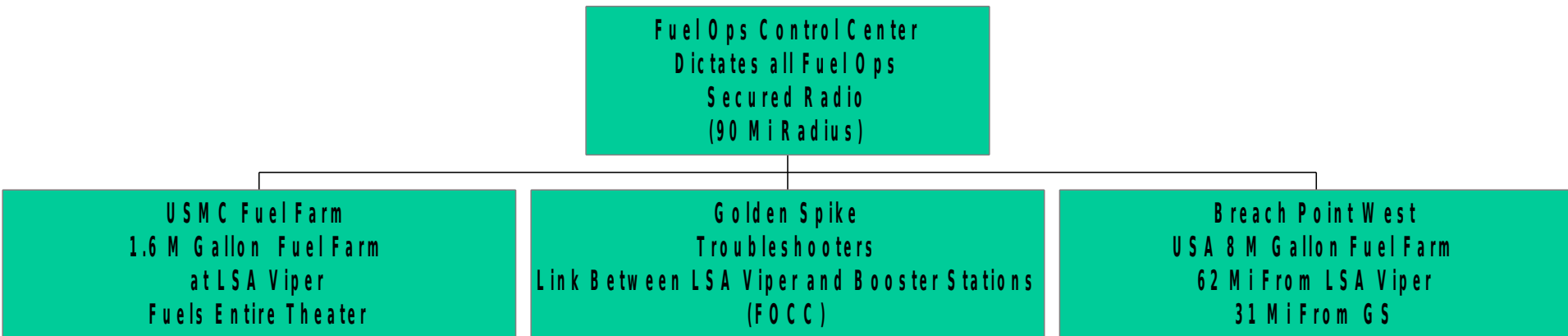
Marines Linkup at Golden Spike



Daily HRS Operations

- Communications
- Coordination
- Sustainment
- Line Walking
- Refueling
- Maintenance

Communications



Fuel Operations Coordination

- USA Fuel Farm Issued Fuel
- Booster Station C-1 Begins Receiving and So Forth to D-17
- Coordination of fuel flow throughout HRS

Sustainment

- Hose line held .5 M Gallons
- Each Booster Maintained 20K Gallons minimum in Bags (10K Per Bag)
- Each Booster pumped 450 Gallons/Minute to Sustain 1.6M Gallons in LSA Viper Fuel Farm.
- At Full Capacity, LSA VIPER required 450K Gallons Per Day

Line Walking

- Booster Stations 3.5 mi
- Time to React
- Security-foot/vehicle
- Mobility
- Communication



Refueling

- USA Fuel Farm's Capacity - 8M Gallons
- HRS Booster Stations and HRS - .5 M Gallons
- LSA Viper's Capacity - 1.6 M Gallons
- LSA Viper Provided:
 - TAFDS
 - USA Cedar Fuel Farm Support
 - Fueled all Vehicles Headed to Baghdad

HRS Advantages

- Minimizes Linehaul for Moving Fuel
- Moves a lot of Fuel
- Flex Hose Maneuvers Well Around Obstacles
- Rapid Deployment
- Expeditionary

Challenges

- Potential Catastrophic Ruptures-Culverts
- Potential Seam Leakages
- UV Ray Damage
- Security
- Deployment in NBC Environment
- Communications

Marines Don't Waiver



Leak Repair



20K Bag



Coupler Markers



IPDS





QUESTIONS?

